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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/631,873 | 08/02/2000 | Rajesh R Shah | 5038-55INTEL#3P222 | 8933 |

7590 10/03/2003

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EXAMINER

SIDDIQI, MOHAMMAD A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2126

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DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/631,873

Applicant(s)

SHAH, RAJESH R

Examiner

Mohammad A Siddiqi

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. Claims 1-27 are presented for the examination.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (hereinafter AAPA) in view of Lipe et al. (US 5748980) (hereinafter Lipe).
4. As per claims 1, 11, 21, and 24, AAPA discloses a method for a parent device to access a service of a child device (note Figure 2A, element 210, 215) in a driver stack (page 1, lines 17-19, the method comprising: Although fails to disclose creating a virtual device, binding the virtual device to the parent device, and inserting the virtual device in the driver stack below the child device, AAPA does disclose accessing the service of the child device (note Figure 2A, element 210, 215). Lipe discloses that creating a virtual device (col 402, lines 53-65), binding the virtual device to the parent device (col 402, lines 53-65), and inserting the virtual device in the driver stack below the child device (col 403, lines 50-61). It would have been obvious to one of ordinary skill in the art at the time of invention to employ the hierarchal tree-like structure containing the device nodes because it provides a system that permits easy installation and configuration of devices, which are capable of identifying themselves and declaring their services and resource requirements to the operating system.
5. As per claims 2 and 12, AAPA discloses the driver stack is a dynamic driver stack (page 2, lines 11-12).

6. As per claims 3 and 13, AAPA discloses accessing the service of the child device includes accessing the service of the child device by the parent device (note Figure 2A, element 210, 215).

7. As per claims 4, 14, 25, and 26, AAPA discloses accessing the service of the child device includes incrementing a reference count of a number of users of the service of the child device (note Figure 3A, element 330, increment must be done prior to remove query, common pair of "AddRef ()" and "Release ()" functions to increment and decrement the component reference count is well known in the art).

8. As per claims 5, and 15, AAPA discloses binding the virtual device includes arranging the parent device to receive a query to remove the dynamic driver stack sent to the virtual device (note Figure 3A, element 305, rearranging the stack on push and pop is well known in the art).

9. As per claims 6, 16, 22, and 23, AAPA fails to disclose, receiving at the virtual device a query to remove the dynamic driver stack, releasing the service of the child device, and passing the query to remove the dynamic driver stack to a next device in the dynamic driver stack.

However, Lipe discloses receiving at the virtual device (col 402, lines 36-40) a query to remove the dynamic driver stack (col 405, lines 14-32, page 214, since virtual device is a child node of the child device), releasing the service of the child device (Figure 11A, element 274), and passing the query to remove the dynamic driver stack to a next device in the dynamic driver stack (col 405, lines 14-32, page 214).

It would have been obvious to one of ordinary skill in the art at the time of invention to employ the hierarchal tree-like structure containing the device nodes because it provides a system that permits easy installation and configuration of devices, which are capable of identifying themselves and declaring their services and resource requirements to the operating system.

10. As per claims 7 and 17, AAPA discloses releasing the service of the child device includes releasing the service of the child device by the parent device (note Figure 3A, 3b, page 2 lines 19-29).

11. As per claims 8 and 18, AAPA fails to disclose releasing the service of the child device includes invoking a code within the virtual device that accesses the parent device.

However, Lipe discloses releasing the service of the child device includes invoking a code within the virtual device (col 402, lines 36-40) that accesses the parent device (col 405, lines 14-32, page 214, since virtual device is a child node of the child device).

It would have been obvious to one of ordinary skill in the art at the time of invention to employ the hierarchal tree-like structure containing the device nodes because it provides a system that permits easy installation, parent-child relationship, and configuration of devices, which are capable of identifying themselves and declaring their services and resource requirements to the operating system.

12. As per claims 9, 19 and 27, AAPA disclose releasing the service of the child device includes decrementing a reference count of a number of users of the service of the child device (note Figure 3A, element 330), page 2 lines 19-29).

13. As per claims 10 and 20, AAPA fails to disclose accessing the service of the child device includes accessing a second service of a second child device above the virtual in the dynamic driver stack.

However, Lipe discloses accessing the service of the child device includes accessing a second service of a second child device above the virtual in the dynamic driver stack (col 5, lines 4-36, and col 13 lines 60-62).

It would have been obvious to one of ordinary skill in the art at the time of invention to employ the hierarchal tree-like structure containing the device nodes because it provides a system that permits easy installation and configuration of devices, which are capable of identifying themselves and declaring their services and resource requirements to the operating system.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patents 6480862 Gall et al.

US Patent 6016466 Guinther et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A Siddiqi whose

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Art Unit: 2126

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telephone number is (703) 305-0353. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MAS



**JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**